dominated savannas, which have been maintained by frequent natural fires, serve as ideal nesting and foraging habitat for the RCW. Development of a thick understory may result in abandonment of cavity trees. Foraging habitat is comprised of open pine or pine/mixed hardwood stands 30 years of age or older (USFWS 2003[58]).

Nest/roost cavities are excavated into the heartwood of living pine trees that are typically older than 60 years of age (USFWS 2003[58]). The RCW excavates resin wells into the cambium around, above and below the cavity entrance, resulting in a shiny, resinous buildup around the cavity. An aggregate of cavity trees is called a cluster and may include one to more than twenty cavity trees. A cluster is occupied by a group of RCWs typically consisting of a breeding male and female and often one or more helpers, usually male offspring from previous years (USFWS 2003[58]),Walters *et al.* 1988a[59]).

In 1992, a Croatan National Forest (CNF) RCW Management Plan[60] was developed by Dr. Jeff Walters of NC State University (NCSU) and Warren Starnes, a CNF biologist (at the time), which proposed to link the fragmented RCW population on the CNF. In the winter of 1992/1993, the USFS contracted the NCSU RCW Research Project to create nine RCW recruitment clusters with artificial cavities and provision cavities within 16 existing inactive clusters on the CNF. The artificial cavity provisioning was the first phase in a five phase plan to link the five subpopulations (as defined by Walters and Starnes[60]) on the CNF and to stabilize isolated clusters on the CNF. The population linkage design was eventually incorporated into The Croatan National Forest Land and Resource and Management Plan 2002[11]. The 2002 Plan emphasizes recovery of RCWs on the CNF using cavity provisioning to attract new RCW breeding groups to existing unoccupied clusters or to newly created clusters. The subsequent four phases were not implemented according to the timeline suggested in the 1992 Management Plan[60].

According to an extensive biological analysis of the RCW in the project area conducted by Dr. J. H. Carter III & Associates, Inc. (JCA) that was completed in December 2007 for the NCDOT, Project Development and Environmental Analysis Branch, Natural Environment Unit[61], one or more of the three detailed study corridors will affect foraging habitat for four existing RCW clusters, one recruitment cluster, one future recruitment cluster and four habitat management areas (HMAs)